

REMARKS

This is a full and timely response to the Office Action of May 2, 2006. Reconsideration and allowance of the application and all presently pending claims are respectfully requested.

Upon entry of this Response, claims 1-4 and 6-21 are pending in this application. Claims 1, 6, 7, and 9 have been amended. Claims 22-37 are canceled without prejudice, waiver, or disclaimer. The prior art made of record has been considered, but is not believed to affect the patentability of the presently pending claims. Applicants believe that no new matter has been added and that a new search is not necessary.

CLAIMS

Claim 1

Claim 1 is rejected under 35 U.S.C. §103 as purportedly being made obvious by Zhou *et al.* (Nat. Biotech., 2001, 19, 375-378) in view of Kundu & Roy (J. Lipid. Res., 1979, 20, 825-833). Amended claim 1 reads as follows:

1. A method of separating phosphorylated peptides from a mixture comprising phosphorylated peptides and unphosphorylated peptides, comprising the steps of:
 - a) reacting a collection of peptides with a first resin, wherein some of the peptides have one or more phosphate group, wherein ***the first resin is selected from a bead, a pallet, a disk, a capillary, a hollow fiber, a needle, a membrane, a solid fiber, a cellulose bead, a polystyrene bead, a grafted co-polymer bead, a poly-acrylamide bead, a latex bead, a dimethylacrylamide bead, and combinations thereof, wherein the first resin comprises primary or secondary amine groups that reacts with the carboxylic acid groups of the peptides to form an amide bond and the phosphate groups of the peptide to form a phosphoramidate bond;***
 - b) optionally selectively cleaving first resin that reacted with a phosphate group of the phosphorylated peptides to regenerate the phosphate group, thereby forming a resin bound collection of peptides wherein some of the peptides have one or more phosphate group;
 - c) reacting the phosphate groups of the resin bound collection of peptides with a capture ligand to form a bond between the phosphorylated peptides and the capture ligand; and
 - d) separating peptides bound to the capture ligand from peptides that are not bound to the capture ligand, thereby separating phosphorylated peptides from unphosphorylated peptides.

(Emphasis added). Applicants traverse all of the assertions and rejections in the Office Action and submit that the rejection of claim 1 under 35 U.S.C. §103 in view of Zhou and Kundu & Roy, individually or in combination, should be withdrawn because each do not disclose, teach, or suggest at least some of the highlighted portions and combinations of the highlighted portion in amended claim 1 above. In particular, Zhou and Kundu & Roy, individually or in combination, do not disclose, teach, or suggest, that “the first resin is selected from a bead, a pallet, a disk, a capillary, a hollow fiber, a needle, a membrane, a solid fiber, a cellulose bead, a polystyrene bead, a grafted co-polymer bead, a poly-acrylamide bead, a latex bead, a dimethylacrylamide bead, and combinations thereof, wherein the first resin comprises primary or secondary amine groups that reacts with the carboxylic acid groups of the peptides to form an amide bond and the phosphate groups of the peptide to form a phosphoramidate bond,” as recited in claim 1. The Office Action admits that Zhou does not disclose a resin having an amine attached thereto. The Office Action suggests that Kundu & Roy cures this deficiency by submitting that Kundu & Roy teach an aminopropyl silica gel. However, claim 1 as amended overcomes the Zhou and Kundu & Roy combination. Therefore, Zhou and Kundu & Roy do not disclose, teach, or suggest, at least this feature of claim 1, and therefore the rejection to claim 1 should be withdrawn.

It should also be noted that Holmes (U.S. Patent 5,679,773), Fields *et al.* (Proc. Natl. Acad. Sci., 1988, 85, 1384-1388), Oda *et al.* (Nat. Biotech., 2001, 19, 379-382), and Mercader *et al.* (Anal. Biochem., 2002, 308, 269-277), individually or in combination, do not disclose, teach, or suggest the features of claim 1 as amended.

Claims 2-4 and 6-21

Applicants respectfully submit that pending dependent claims 2-4 and 6-21 include every feature of independent claim 1 and that each of the references fails to disclose, teach, or suggest, individually or in combination, at least the features of claim 1 highlighted hereinabove. Thus, pending dependent claims 2-4 and 6-21 are also allowable over the prior art of record. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested.

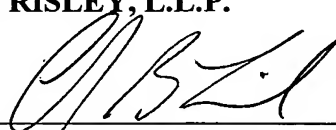
In addition, any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and official notice, or statements interpreted similarly, should not be considered well known since the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions.

If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted ,

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